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The goal of the University of Alabama at Birmingham Interdisciplinary Breast Cancer Training Program (IBCTP) is to educate and train predoctoral students in a multidisciplinary environment with a focus on breast cancer research. The aims are to 1) recruit predoctoral trainees to the Interdisciplinary Breast Cancer Training program; 2) assure that predoctoral trainees obtain a broad-based breast cancer education and carry out interdisciplinary breast cancer research; 3) administer this program with sufficient oversight to ensure high-quality education and training, efficient completion of degree requirements, and productive research careers. Our faculty is drawn from 11 departments/affiliations. Our training program is designed to prepare and motivate trainees to pursue careers in the fields of breast cancer causation, prevention, diagnosis, therapy and education. In academic year 2001-2002, we had 2 predoctoral students successfully complete their course work and laboratory rotations, and have recruited an additional 2 students for 2002-2003. The IBCTP hosted 6 outside scientists to present seminars on cancer related research and to talk to the predoctoral trainees. The interdisciplinary Breast Cancer Causation and Regulation course received a "very good" evaluation.

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INTRODUCTION

The goal of the University of Alabama at Birmingham Interdisciplinary Breast Cancer Training Program (IBCTP) is to educate and train predoctoral students in a multidisciplinary environment with a focus on breast cancer research. Our faculty is drawn from 11 departments/affiliations. The aims are to 1) recruit predoctoral trainees to the IBCTP; 2) assure that predoctoral trainees obtain a broad-based breast cancer education and carry out interdisciplinary breast cancer research; 3) administer this program with sufficient oversight to ensure high-quality education and training, efficient completion of degree requirements, and productive research careers. Our training program is designed to prepare and motivate trainees to pursue careers in the fields of breast cancer causation, prevention, diagnosis, therapy and education.

KEY ACCOMPLISHMENTS

Specific Aim 1) To recruit predoctoral students to UAB's Department of Defense Interdisciplinary Breast Cancer Training Program (IBCTP).

Recruiting involves 1) mailings to universities and colleges in the U.S., 2) registration with the Graduate Record Exam Services (GRE) and Gradschool.com and 3) a UAB web site (<http://main.uab.edu>; click onto Graduate School; Programs of Study; Administration and Business; Basic Life and Biomedical Sciences; Breast Cancer Training Program). To students that inquire about the IBCTP, we send out letters, information about the IBCTP and UAB, and graduate school applications. Applications are reviewed by the admissions committee, and selected applicants offered the opportunity of visiting UAB for an interview.

For academic year 2001-2002, 5 applicants (from 37 completed applications) were interviewed and fellowships awarded to 2 students (Damon Bowe and Mubina Nasrin). They have successfully completed their first year of academic studies and lab rotations. Mr. Bowe has chosen to carry out his dissertation research with Dr. Jeffrey Kudlow (Endocrinology) on signal transduction and breast cancer. Dr. Nasrin has chosen to carry out her research with Dr. Coral Lamartiniere (Pharmacology and Toxicology). Her research will be concerned with genistein and paclitaxel combinational therapy of breast cancer. Both students are still being supported by the training grant.

For academic year 2002-2003, 4 applicants were interviewed (from 34 applications) and fellowships offered to 2 students (Timothy Whitsett and Hope Amm). Mr. Whitsett graduated from Yale University with a 3.59 GPA and Ms. Amm graduated from Saint Mary's College (Notre Dame) with a 3.38 GPA. Both have accepted and are enrolled.

Returning as third year breast cancer trainees are Ms. Chantelle Bennetto and Mr. Craig Rowell.

Interdisciplinary education is facilitated by faculty from 11 departments/programs in the form of specialty and core courses including, Breast Cancer Causation and Regulation, Biological Chemistry and Cellular Physiology, Pathophysiology and Pharmacology of Disease, Molecular Medicine and Functional Genomics, Principles of Toxicology, Breast Cancer Seminars, 3 laboratory rotations and electives. Interdisciplinary research is promoted via laboratory rotations, and require primary- and secondary-research foci. Students select their mentors in the second year and, in the third year they will identify dissertation committees that will reflect interdisciplinary research.

In addition to structured lectures, the IBCTP supports a breast cancer seminar series whereby we have experts in cancer causation and regulation come to our campus and provide seminars and meet with our students. This expands the education and training of our predoctoral trainees, and provides them with the opportunity of meeting future employers. This has received a most favorable response from students and faculty. The list of seminar speakers is provided in the Appendix.

Aim 3. To administer this institutional training program with sufficient oversight to insure high-quality education and training, efficient completion of degree requirements, and productive research careers.

The IBCTP Executive Committee oversees the interviewing and selection of prospective predoctoral students, the academic and research program, the progress of the trainees and the budget. The Executive Committee consist of representatives from 5 interdisciplinary research foci: Robert B. Diasio (Cancer Pharmacology), Thearse Strong (Gene Therapy), Clinton Grubbs (Chemoprevention), Francis Kern (Mechanisms of Growth Control), Charles N. Falany (Cancer Causation), plus one student trainee (Mr. Craig Rowell), and Dr. Coral A. Lamartiniere (Program Director). This is an ongoing process.

The appendix contains the lectures for the Breast Cancer Causation and Regulation course for 2000 and 2001. Changes in this course take into consideration the course evaluation by the students and course director. The course in 2000 received a "very good" evaluation.

REPORTABLE OUTCOMES

We do have 4 students enrolled in the IBCTP. Please see the Appendix for credentials.

Two students did attend the 2001 American Association for Cancer Research Meeting in New Orleans.

The IBCTP did host 6 seminar speakers. The list of speakers is provided in the Appendix.

After one year, there are no publications by the students.

genistein. Proceedings of the American Association for Cancer Research. 43:35, 2002.

The IBCTP hosted 6 seminar speakers. The list of speakers is provided in the Appendix.

APPENDIX

Student Credentials

IBCTP Seminar Speakers

2002 Breast Cancer Caution and Regulation Lectures

**Students Enrolled in the University of Alabama at Birmingham Interdisciplinary
Breast Cancer Training Program**

<u>Student</u>	<u>Previous Degree Institution</u>	<u>Date of Entry</u>	<u>GPA</u>	<u>Verbal</u>	<u>Quantitative</u>	<u>Analytical</u>
Craig Rowell	BS (95) Lake Forest IL MS (00) UAB	2000	3.8	580	610	680
Chantelle Bennetto	BS (99) U. Saskatoon Canada	2000	4.0	510	660	710
Mubina Nasrin	MD (94) M.R. Medical College, India	2001	no GPA	690	650	670
Damon Bowe	BS (99) Bates College Maine	2001	3.5	590	580	710
Hope Amm	BS (02) Saint Mary's College	2002	3.38	550	640	490
Timothy Whitsett	BS (02) Yale University	2002	3.59	530	700	750

2001-2002 University of Alabama at Birmingham
Interdisciplinary Breast Cancer Training Program Seminars

October 23, 2001

Anning Lin, Ph.D.

Ben May Institute for Cancer Research

University of Chicago

"TNF alpha signaling, interplay between IKK, JNK and caspases"

March 12, 2002

Leland Chung, Ph.D.

Biochemistry, and Hematology/Oncology

Emory University School of Medicine

"Biology and Targeting of Prostate Cancer Bone Metastasis"

April 02, 2002

Colin Jefcoate, Ph.D.

Department of Pharmacology

University of Wisconsin Medical School, Madison

"The Role of the Ah Receptor in Physiological and Toxicological Processes,
Adipogenesis and Mammary Glands as Models"

April 23, 2002

Lewis A. Chodosh, M.D., Ph.D.

Departments of Cancer Biology and

Cell & Developmental Biology

University of Pennsylvania School of Medicine

"Transgenic and Microarray Approaches to Mammal
Development and Carcinogenesis"

April 29, 2002

Susan E. Waltz, Ph.D.

Pediatrics and

Children's Hospital Research Foundation, Cincinnati

"In Vivo Functions for the Receptor Tyrosine Kinase Ron"

June 11, 2002

Andrei Khokhlatchev, Ph.D.

Department of Molecular Biology

Harvard Medical School

"Identification of a new Ras-regulated Pathway that Controls Apoptosis"

Breast Cancer Causation and Regulation

TOX 750

Fall 2002

Mondays and Wednesday, 3-5 pm in Volker Hall 108D

Course Director: Coral A. Lamartiniere

Volker Hall 124; 4-7139; Coral.Lamartiniere@ccc.uab.edu

Administrative Coordinator: Elizabeth Wilson Volker Hall 101C; 4-4579; Elizabeth.Wilson@ccc.uab.edu

Date	Topic	Instructor (Department)
Wed Sept 4	Overview of the Breast Cancer Problem	John Waterbor (Epi)
Mon Sept 9	Environmental Carcinogenesis	Coral Lamartiniere (Pharm/Tox)
Wed Sept 11	Primary Prevention	Mona Fouad (Preventive Medicine)
Mon Sept 16	Oncogenes and Suppressor Genes?	Mike Ruppert (Medicine)
Wed Sept 18*	Estrogens and Breast Cancer	Deodutta Roy (Env Hlt Sci)
Mon Sept 23	Exam	
Wed Sept 25	Animal Models in Breast Cancer	Clinton Grubbs (Chemoprevention)
Mon Sept 30	Nuclear Receptors as Targets for Novel Small Molecule Therapeutics	Donald Muccio (Chemistry)
Wed Oct 2	Steroid Hormone Action in the Breast	Stephen Barnes (Pharm/Tox)
Mon Oct 7	Signal Transduction and Breast Cancer	Jeffrey Kudlow (Endocrinology)
Wed Oct 9	Mathematical Modeling of Cancer	Seng-Jaw Soong and Lynya Talley (Biostatistics)
Mon Oct 14	Exam	
Wed Oct 16	Targeted Immunotherapy	Denise Shaw (Medicine)
Mon Oct 21	Gene Therapy	Theresa Strong (Gene Therapy)
Wed Oct 23	Pathology of Breast Cancer	Andra Frost (Pathology)
Mon Oct 28	Cancer Pharmacology	Robert Diasio (Pharm/Tox)
Wed Oct 30	Breast Cancer Metastasis	Joanne Douglas (Pathology)
Mon Nov 4	Exam	

* 3:10-3:15 lecture because Dr. Roy has another lecture terminating at 3:00.